Studies on Costa Rican Odonata.

VIII. A New Genus Allied to Cora.

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In our recent book on Costa Rica* we have referred (page 255) to the capture, at Peralta, August 8, 1909, of "a medium-sized dragonfly, of an apparently new genus allied to *Cora*." Only a single male was obtained in spite of search in the same locality on following days in August and in March, 1910. The insect is evidently distinct from *Cora*, although the latter is its closest known ally. Mr. E. B. Williamson has very recently obtained a long series of the same genus, and possibly the same species, in Colombia, some specimens of which he has kindly sent me for examination, so that the recognition of this form as generically distinct seems thoroughly justified. The following account is based on the Costa Rican specimen, leaving to Mr. Williamson the future description of his Colombian material.

MIOCORA† new genus.

Possessing these characters of the legion Thore of Selys, viz.: Upper and lower sectors of the arculus (M1-3 and M4) separating from the upper (anterior) end of the arculus; proximal side of the quadrilateral much longer than the distal, its anterior (upper) side concave, costal and subcostal series of antenodals subequal in number but not coinciding in position in most cases; quadrilateral and median cell (M) cross-veined, the former shorter than the latter; and the following characters of the genus *Cora* Selys, viz.: M3 unbranched, no supplementary sectors between M4 and Cu1, and only one antenodal cross-vein (here the 8th or 9th, front wings, 9th or 10th, hind wings, of the costal series) thicker than the others.‡

*A Year of Costa Rican Natural History by Amelia Smith Calvert and Philip Powell Calvert, New York. The Macmillan Company, 1917.

†Greek μείων, less, and *Cora*, in allusion to the reduced venation in comparison with that genus.

‡In the Colombian specimens the thickened antenodal varies from the 9th to the 14th, front wings, 8th to 13th, hind wings.

Its distinctive differences from *Cora*, and indeed from the whole legion Thore of de Selys (1869), are the unbranched condition of Cu2, the presence of only a single row of cells between Cu1 and Cu2, and of only a single row between Cu2 and the hind margin of the wing.

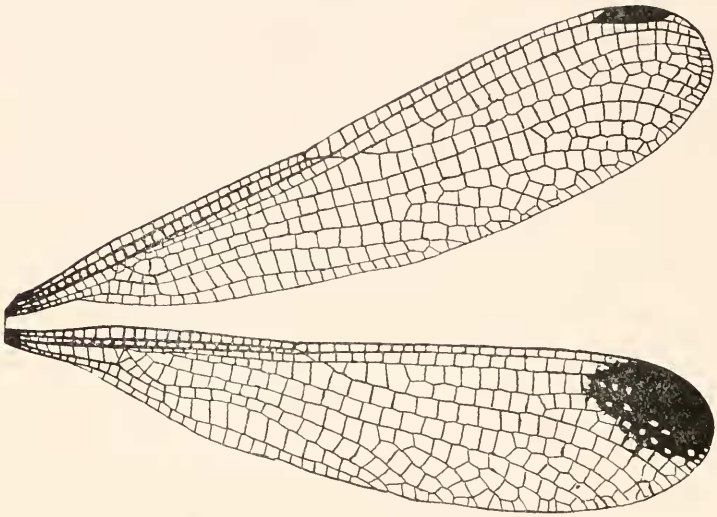

Fig. 1.—Venation of *Miocora peraltica* ♂, Peralta, Costa Rica, August 8, 1909 From photograph by Mr. H. A. Walters. See text for an explanation concerning the front wing.

The venation is displayed in the accompanying figure where, owing to the longitudinal folding of the front wing, M1-3 and M1-2 for a short distance distal to the separation of M3 is not shown as distinct from R, as it actually is in both front and hind wings, and as shown in our figure of the hind wing.

Genotype: *Miocora peraltica* n. sp.

Miocora peraltica n. sp. (Text figs. 1-4).

♂. Colors (as noted from the freshly caught specimens, some additional details not mentioned in the field notes but visible in the dried specimen being added in brackets [ ]): Eyes dark brown, below somewhat bluish. [Remainder of the head black, a short orange streak between each antenna and the median ocellus but nearer to the antenna], labrum, genae and external surfaces of the mandibles light blue, [cardines, stipites, submentum, mentum and basal two-thirds of median labial lobe pale luteous, probably also light blue in life.].

[Prothorax black, a pale blue? spot on each side of the middle lobe.]

Thoracic dorsum blackish; humeral suture, most of metepisternum and much of metepimeron pale bluish-green, but metepisternum and metepimeron each with an [oblique] blackish stripe, less than one-half as wide as the metepisternum but more than one-half as wide as the metepimeron. [Pectus pale bluish-green.]

Abdomen black, a spot on each side of segment 1, a longitudinal stripe on each side of 2 and a small basal spot on each side of 3, pale green.

Ventral surface of thorax pruinose and traces of pruinosity on ventral surfaces of abdominal segments.

[Legs: femora superiorly, tibiae inferiorly and tarsi blackish brown, femora inferiorly and tibiae superiorly pale, perhaps bluish in life.]

Superior appendages twice as long as abdominal segment 10, hardly as long as segment 9, black, in dorsal view forcipate, each becoming more slender to the apex which is acute and bent mesad at the extreme tip. Each appendage has a straight inferior process, projecting mesad, ventrad and caudad, best seen in oblique dorso-lateral view, and whose

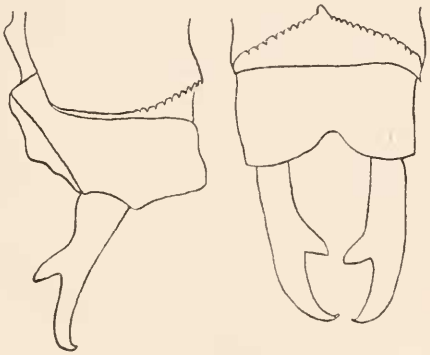

Fig. 2.—Left profile, Fig. 3.—Dorsal
Views of apex of abdomen of *Miocora peraltica* n. sp., type ♂.

proximal and distal edges separate from the inferior margin of the appendage at 5/14 and 8/14 of the latter's length respectively; distal edge of this process 3/14 of the length of the appendage; process becoming more slender toward its roundly acute apex. In profile view each appendage is directed caudad and ventrad as far as the last tenth of its length where its acute apex is curved dorsad; the appendage gradually decreases in thickness from base to apex, shows on its inferior margin a slight post basal convexity and the process described above, foreshortened at about mid-length. Inferior appendages not developed.

Front wings: 26 to 28 antenodals, 24 to 25 postnodals, 10 cross-veins in the median space, 3 cross-veins in the quadrilateral, pterostigma surmounting five cells and parts of one or two others, its proximal edge twice as long as its distal edge.

Hind wings: 25 to 22 antenodals, 24 to 26 postnodals, 8 to 9 cross-veins in the median space, 4 cross-veins in the quadrilateral, pterostigma surmounting four cells and parts of two others, its proximal edge 1.6 as long as its distal edge.*

All wings faintly smoky, costal and subcostal areas faintly yellowish from the base distad to beyond the nodus. Hind wings with an apical brown spot extending from about two cells proximal to the proximal end of the stigma to the wing-apex and from the costal margin to M_2, some cells between M_2 and Rs, also being faintly brown, many of the cells within the area of the spot paler in their centers. Pterostigmata dark reddish brown.

Total length 42, abdomen 34, superior appendage 1.16, hind wing 24.5,

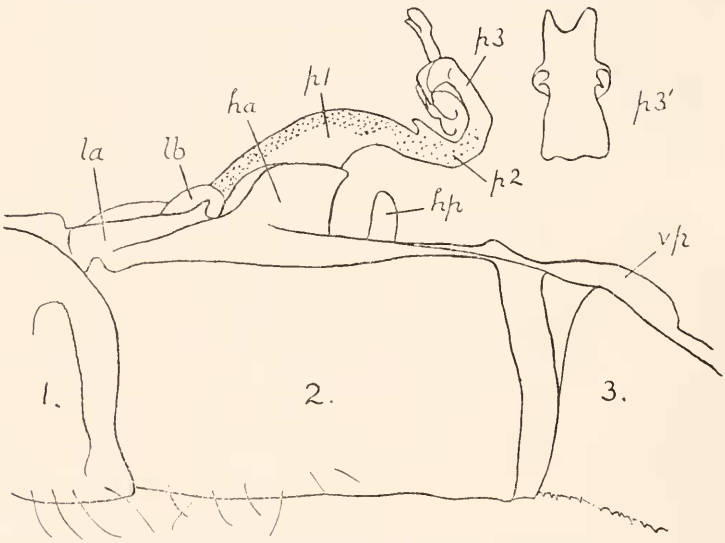

Fig. 4.—Genitalia of the basal abdominal segments, *Miocora peraltica*, n. sp., type ♂. The abdomen is viewed from the right side, ventral surface uppermost. 1, 2, 3, abdominal segments 1, 2 and 3; *ha*, *hp*, anterior and posterior hamules; *la*, anterior lamina; *lb*, lamina batilliformis of Rathke (1832) and Schmidt (1915), sheath of the penis of Rambur (1842) and of American authors; *p1*, *p2*, *p3*, first, second and third segments of the penis of Kennedy (1916); *p3'*, third segment in dorsal view; *vp*, vesicle of the penis ("Samenkapsel").

*As might be expected, the Colombian specimens show some variations in the numbers of these veins and surmounted cells in both front and hind wings.

costal edge of stigma of front wing 2, of hind wing 1.8, maximum width of front wing (mid-way between nodus and stigma) 5.5, same of hind wing, 5.5, width of head 4.8 mm.

Type a male from Peralta, Costa Rica, August 8, 1909, by P. P. Calvert, in the writer's collection at the Academy of Natural Sciences of Philadelphia.

In August, 1909, a short distance back of Peralta Station of the Costa Rica Railway, altitude 322 meters, 1055 feet, there extended a Y-shaped track to enable locomotives to reverse their heading. At the end of the stem of the Y was a narrow, slow-moving stream called simply "laguna." Just beyond the laguna was a low woods consisting of small trees, arums, ferns, heliconias and numerous vines or creepers. Here the type of *Miocora peraltica* was taken about noon.

The generic name *Thore* Selys, 1853, from which his legion Thore takes its appellation, was preoccupied by the name *Thore* applied to a subgenus of Attid spiders by C. L. Koch (Übersicht des Arachnidensystems, 5tes Heft, p. 66, Nürnberg, 1850). I therefore propose the name **Polythore** for the Odonate genus in allusion to the denser venation of its members in comparison with other genera of the Selysian legion. The type of *Thore* was fixed by Kirby (Cat. Odon. 1890, p. 116) as *T. gigantea* Selys, so this species becomes the genotype of *Polythore*. The oldest generic name thus left in the legion is *Chalcopteryx* Selys, 1853.

The Knaus Collection of Coleoptera.

Mr. Warren Knaus (class of 1882, Kansas State Agricultural College) has donated to the Entomological Museum of the College, his valuable collection of Coleoptera. Ever since he was a student in the College, Mr. Knaus has spent practically all of his spare time and vacations in collecting and studying the Coleoptera. He has made many trips into the arid regions of Mexico, Arizona, Texas and New Mexico to collect insects. These trips have been productive of a great many new species. His collection contains a number of species that are only found in one or two museums in the world, and these were furnished by Mr. Knaus. His collection will be kept separate and will be known as the "Warren Knaus Collection."—George A. Dean, Manhattan, Kansas.